

They're not math tests. They're thinking tests.



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A Parent's Guide to the American Mathematics Competitions (AMC)

What the competitions actually measure, why most students prep wrong, and what to do instead.

What this guide covers

- The AMC pathway
- Why participate?
- When students start preparing
- The AMC 10/12 season roadmap
- The mistake most students make
- The final 90 days
- Score goals change strategy
- Why summer preparation matters



These national contests are built to test how students think, not just what they know.

Not your typical math tests

These are not memorization tests. AMC problems reward **reasoning, pattern recognition, and strategy**. Students who rely on procedures get stuck. Even students who top their math classes.

A yearly intellectual challenge

This becomes a benchmark, not a one-off test. For many students, the AMC turns into a yearly challenge, a way to **measure how their thinking is actually improving over time**.

A gateway to further competitions

Strong performance opens the next door. High scores can lead to qualification for the **AIME** (American Invitational Mathematics Examination) and beyond, where the problems get **harder** and the thinking has to get **sharper**.

The AMC pathway

These form a progression. Each level doesn't just get harder — it demands better thinking.

AMC 8

Typical grades:

Students in grades 6–8

Math level:

Middle school mathematics

This is where students learn how to think, not just compute.

The math is accessible. The challenge is in seeing what to do and doing it cleanly under time pressure.

AMC 10

Typical grades:

Students in grades 8–10

Math level:

Algebra, geometry, counting, and number theory

The content is still familiar. The thinking is not.

Students have to connect ideas across topics and stay disciplined when problems stop looking routine.

AMC 12

Typical grades:

Students in grades 10–12

Math level:

The full high school mathematics curriculum

This is where strong students get exposed.

The math isn't dramatically harder. The problems just demand better decisions, better structure, and fewer mistakes.

Rewards deep, logical thinking.

AIME

Who takes it:

Students who qualify through strong scores on the AMC 10 or AMC 12

Math level:

Advanced problem solving

No answer choices. No shortcuts.

You either understand the problem well enough to solve it, or you don't. Qualifying is also an officially recognized admissions credential — one that elite colleges know and respect.

For many students, this becomes a yearly cycle: test, adjust, improve.



Why participate?

Most students don't just stick with the AMC to make their college applications stand out. They stick with it because it's **one of the few places where math actually gets interesting.**

It rewards thinking, not memorization.

Students learn to break down unfamiliar problems instead of reaching for the nearest formula.

It changes how students approach math.

School math becomes less about getting through assignments and more about understanding structure.

It builds real problem-solving habits.

Students get comfortable being stuck, testing ideas, and adjusting instead of freezing or guessing.

It creates meaningful academic signal.

Grades are inflated. SAT scores are gameable. A strong AMC score is neither — fewer than half of participants answer 9 of 25 correctly.

It connects students to a different peer group.

Students find others who enjoy the challenge instead of just chasing grades.

☐ For many students, the main motivation is simpler: **the problems are genuinely fun.**

When students usually start preparing

This is not a cramming situation. Or a wing-it situation.

You simply cannot do well on this test cold. Preparation isn't optional; it's the price of entry.

Students who start early build tools. Students who start late feel rushed and guess more than they should. Serious competitors **start months before the season**.

Students who start early usually:

Learn common AMC problem-solving strategies

Strengthen weaker math areas

Build confidence solving unfamiliar problems

Students who start late usually:

Feel rushed.

Make common "bright kid" mistakes, leading to lower scores. [\[See what those look like →\]](#)

Assume they'll do fine without much prep.
Almost no one does.



AMC preparation works best when treated as a season, not a cram event.

One more thing worth knowing: this test can't be gamed the way the ACT or SAT can. The scoring penalizes wrong answers, so hunch-based guessing actually costs points. What works is genuine preparation. That's good news — it means a strong score still means something.

Need help preparing? Let's chat

The AMC 10/12 season roadmap

Your guide to preparing for the AMC

The quiet truth about AMC prep

To repeat: this is not a cramming situation.

Students who treat it like one usually plateau. Students who treat it like a training season steadily improve.

This has almost nothing to do with intelligence.

It's **structure**.

Serious competitors approach AMC preparation the way athletes approach a season: building tools first, sharpening performance later, and peaking at the right time.

Here's how that structure works.



❏ Note: this guide assumes considerable AMC potential. Most students attempting this would require something 3x–10x the recommended quantity of preparation time.

The three phases of AMC preparation

Successful AMC seasons almost always follow the same arc:



Phase 1: Build the toolkit

If you skip this phase, everything else breaks.

Goal: develop problem-solving tools and close content gaps.

This is the quiet phase of training. Emphasis is on understanding how AMC problems work.

Students focus on:

- learning problem-solving strategies
- recognizing common problem structures
- strengthening weaker content areas
- understanding why solutions work

Typical structure:

- 3–5 AMC problems per day
- careful solution analysis
- occasional focused topic study

Not yet:

- taking frequent full practice tests
- racing through large numbers of problems
- worrying about scores

Phase 2: Sharpen execution

This is where most students start.

And why they plateau.

Goal: apply tools under realistic conditions.

Once students have a working toolkit, preparation shifts toward execution and timing. Decisions start to matter.

Bad decisions start to cost points.



Pacing

Learn to move through problems at a deliberate pace — not too fast, not too slow.



Knowing when to skip

Recognize quickly when a problem isn't worth the time, and move on without hesitation.



Returning efficiently

Come back to unsolved questions with a clear head and a plan.

At this stage the AMC becomes less about raw math knowledge and more about **strategic thinking under time pressure**.





Phase 3: Peak and perform

*At this point, you're not getting smarter.
You're getting clearer.*

The final stretch focuses on consistency and composure.
Goal: convert skill into reliable performance.



Full test simulations

Run complete timed tests under real conditions to build stamina and consistency.



Mistake reduction

Review every test carefully. Recurring errors are the clearest signal of what to fix.



Energy management

Arrive at competition day sharp and rested — not depleted from overtraining.

The goal is simple: **show up sharp, calm, and ready to execute.**



Overtraining in the final days usually hurts performance.

Most students waste their best practice tests

They use them before they're ready. Then wonder why nothing improves.

What most students do

1. **Use practice tests too early** — before real problem-solving tools are built.
2. **Run out of meaningful tests** before competition season arrives.

What they should do instead

1. **Build the toolkit first** — then measure performance.
2. **Space tests out** — treat each one as a one-time, high-value experiment. AMC exams are finite. Once a problem is familiar, the test stops telling you anything real.

Practice tests are **experiments**, not warm-ups. Spacing them out preserves their value.



Did you know?

WCTC students qualify for the AIME at 7x the national rate.

Let's chat

What the final 90 days usually look like

The last three months before an AMC are typically the most structured part of preparation. At this stage, students are refining execution rather than learning large amounts of new content.



Timed practice test

3-6 full AMC tests under real conditions.



Shorter sessions

Four or five focused timed practice sets throughout the week.



Analysis session

One careful review: where did time go? Which mistakes repeated? What should have been skipped?

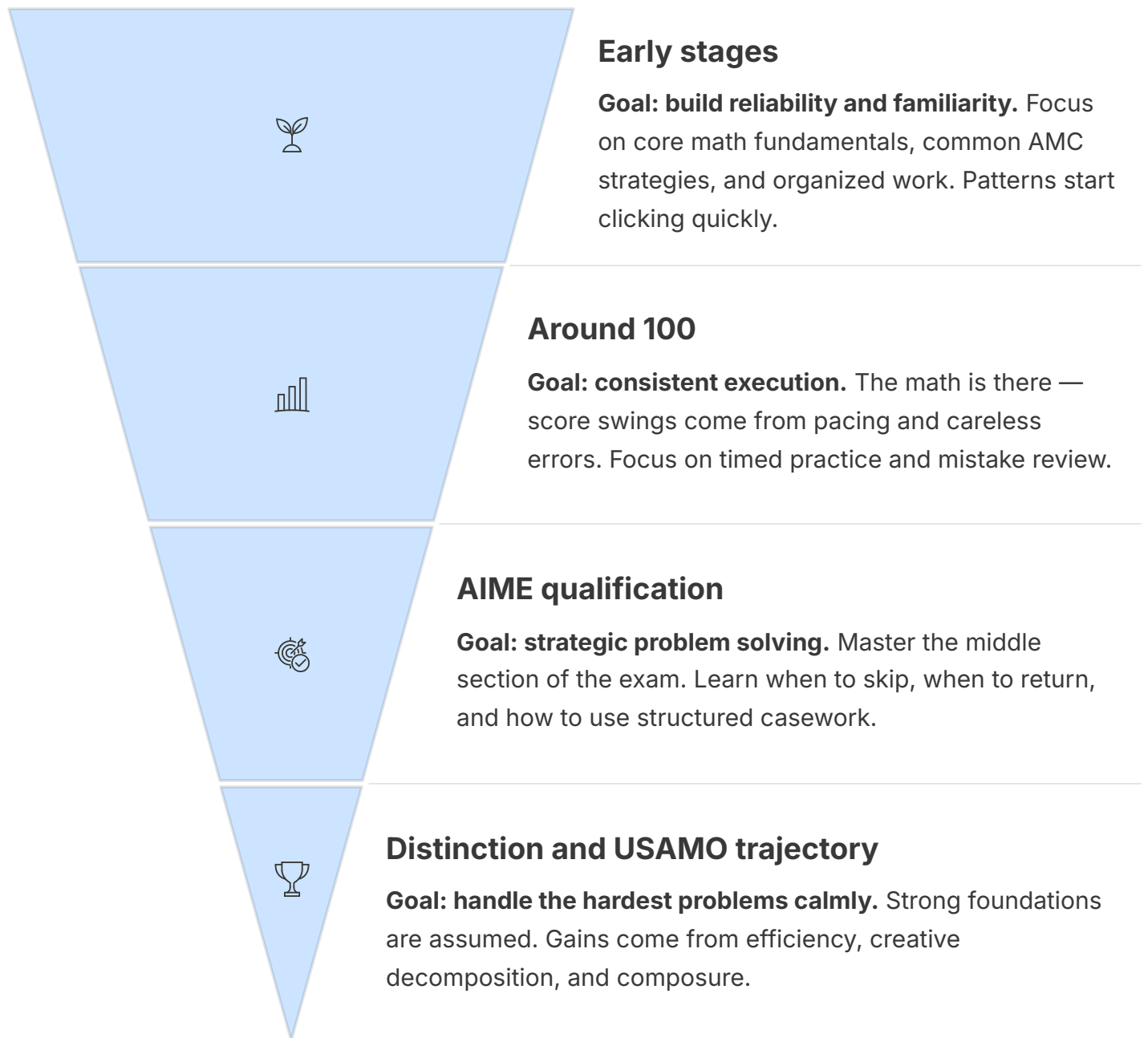


**The practice test doesn't make you better.
The review does.**

Improvement at this stage comes from **better decisions**, not harder math.

Score goals change strategy

Different scores require different thinking, not more effort.



Most students move through these stages over multiple seasons.

Why summer preparation matters

Ninety days is enough time to improve.

But it is tight.

Students who complete the **toolkit phase earlier in the year** enter the fall competition season focused entirely on execution. That makes the entire season calmer and more productive.

Without summer prep

Students enter competition season still learning strategies — racing the clock while trying to build tools they should already have.

With summer prep

Students enter the fall focused entirely on execution — sharpening skills they already understand. The whole season is calmer and more productive.

❏ The toolkit phase is the hardest to rush. Most students try anyway.

Use your student's summer wisely: Work with a WCTC tutor

- Structured toolkit building
- Guided mistake analysis
- Focused strategy training
- A clear transition into execution season

If you want the foundation done before things intensify, summer is the smart time.

Let's chat



Final thoughts

AMC success rarely comes from doing more work than everyone else.

It comes from doing the right work at the right time.

Most students don't.

1

Build

Tools and strategies first.

2

Sharpen

Execution under real conditions.

3

Peak

Calm, composed, ready.

Students who follow this arc improve steadily, season to season.



Wes Carroll
Tutoring & Coaching

How we work

Most tutoring fixes the next test.
We fix the student.



Coach for understanding, not memorization



Build habits that outlast high school or college (or the AMC)



Blend academic rigor with emotional insight and executive skills



Help students grow into confident, self-directed learners

We're not just here to teach subjects. We're here to build thinkers.

Let's figure out how to crush the AMC together. Our students qualify for the AIME at **7x the national rate.**

Book a free call with us and we'll map out the right support for your student.

Start here: wescarroll.com/start